

IN THE DRAWINGS

The attached sheets of drawings include changes to Fig. 1-25D. These sheets, which include Figs. 1-25D, replace the original sheets including Figs. 1-25D.

Attachment: Replacement Sheets

REMARKS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 25 and 26 are currently pending. Claims 1-24 have been canceled without prejudice and Claims 25 and 26 have been amended by the present amendment. The additions to the claims are supported by the originally filed specification and do not add new matter.

In the outstanding Office Action, Figures 1-25D were objected to as not containing a legend such as "Background Art"; Claims 19, 20, 23, and 24 were rejected under 35 U.S.C. § 101 as being directed to nonstatutory subject matter; Claim 3 was rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with enablement requirement; Claims 1, 2, 8, 9, 11, 12, and 15-24 were rejected under 35 U.S.C. § 102(a) as being anticipated by "Applicants' admitted prior art" (hereinafter "the Background Art"); Claims 4-7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Background Art; Claims 10 and 13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Background Art in view of U.S. Reissue Patent No. 39,281 to Yukitake et al. (hereinafter "the '281 patent"); and Claims 3 and 14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the Background Art in view of Marpe et al. ("Adaptive Codes for H.26L").

Applicants respectfully submit that the objections to the drawings are rendered moot by the present amendment to the drawings. Figures 1-25D have been amended to include the legend "Background Art". Accordingly, the objection to the drawings is believed to have been overcome.

Applicants respectfully submit that the rejections of Claims 19, 20, 23, and 24 under 35 U.S.C. § 101 are rendered moot by the present cancellation of those claims.

Applicants respectfully submit that the rejection of Claim 3 under 35 U.S.C. § 112, first paragraph, is rendered moot by the present cancellation of Claim 3.

Applicants respectfully submit that the rejections of Claims 1-24 under 35 U.S.C. §§ 102 and 103 are rendered moot by the present cancellation of Claims 1-24.

The present amendment also sets forth new Claims 25 and 26 for examination on the merits.

New Claim 25 is directed to an encoding method for adaptively carrying out field-based or frame-based encoding processing at a macroblock level with image information as an input, the encoding method comprising: (1) a first generation step of generating a context model corresponding to a frame/field flag indicating whether the encoding processing at the macroblock level is field-based or frame-based; (2) a second generation step of generating a context model corresponding to a syntax element for carrying out the frame-based or the field-based encoding processing, wherein, the context model corresponding to motion vector information of a current macroblock is generated based on a sum of an absolute value of motion vector information of macroblocks neighboring the current macroblock, and if the current macroblock is subjected to the field-based encoding and a neighboring macroblock is subjected to frame-based encoding, the motion vector information corresponding to the neighboring macroblock is calculated by converting the vertical component of the motion vector information corresponding to the neighboring macroblock to the equivalent for field-based encoding and is applied to the context model corresponding to the motion vector information of the current macroblock; and (3) an encoding step of carrying out the encoding processing using the context model corresponding to the motion vector information of the current macroblock generated in the second generation step. New Claim 25 is supported by the originally filed specification and does not add new matter.

Applicants respectfully submit that new Claim 25 patentably defines over any proper combination of the cited references.

The Background Art discusses the MPEG2 and H.26L standard for image encoding of video images. In particular, the Background Art discloses the image encoding apparatus shown in Figure 1, which includes a lossless encoding section 6. Further, the Background Art discloses that the lossless encoding can include variable length encoding or arithmetic coding. In addition, as shown in Figure 5, the Background Art discloses a typical structure for a CABAC encoder to which the CABAC method is applied. Further, as noted in the outstanding Office Action, the Background Art in paragraph [0098] of the published application states that a frame/field flag may be used to indicate whether a particular map or block may be subjected to frame-based encoding or field-based encoding.

However, Applicants respectfully submit that the Background Art fails to disclose that the context model corresponding to motion vector information of a current macroblock is generated based on a sum of an absolute value of motion vector information of macroblocks neighboring the current macroblock, and if the current macroblock is subjected to the field-based encoding and a neighboring macroblock is subjected to frame-based encoding, the motion vector information corresponding to the neighboring macroblock is calculated by converting the vertical component of the motion vector information corresponding to the neighboring macroblock to the equivalent for field-based encoding and is applied to the context model corresponding to the motion vector information of the current macroblock, as recited in new Claim 25.

The Marpe reference is directed to a new entropy coding scheme for H.26L based on adaptive context-based arithmetic coding. In particular, the Marpe reference discloses context models for coded block patterns, context models for intra-prediction modes, and context models for run/level pairs. However, Applicants respectfully submit that the Marpe

reference fails to disclose a context model corresponding to motion vector information of a current macroblock that is generated based on a sum of an absolute value of motion vector information of macroblocks neighboring the current macroblock, and if the current macroblock is subjected to the field-based encoding and a neighboring macroblock is subjected to frame-based encoding, the motion vector information corresponding to the neighboring macroblock is calculated by converting the vertical component of the motion vector information corresponding to the neighboring macroblock to the equivalent for field-based encoding and is applied to the context model corresponding to the motion vector information of the current macroblock, as recited in new Claim 25. Accordingly, Applicants respectfully submit that new Claim 25 patentably defines over the Marpe reference.

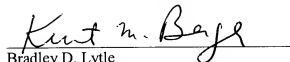
New Claim 26 is directed to an encoding apparatus claim and recites limitations analogous to the limitations recited in new Claim 25. Accordingly, Applicants respectfully submit that new Claim 26 is supported by the originally filed specification and patentably defines over the Background Art and the Marpe reference.

Thus, it is respectfully submitted that independent Claims 25 and 26 patentably define over any proper combination of the Background Art, the '281 patent, and the Marpe et al. reference.

Consequently, in view of the present amendment and in light of the above discussion, the outstanding grounds for rejection are believed to have been overcome. The application as amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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A handwritten signature in cursive script, appearing to read "Kurt M. Berger", is written over a horizontal line.

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